

Title (en)  
Automatic tool changer for a machining apparatus.

Title (de)  
Automatischer Werkzeugwechsler.

Title (fr)  
Changeur porte-outils automatique.

Publication  
**EP 0492816 A1 19920701 (EN)**

Application  
**EP 91311097 A 19911129**

Priority  
JP 33682990 A 19901130

Abstract (en)  
Disclosed is an improved automatic tool changer for use in a machining apparatus. The automatic tool changer is designed to cooperate with adapters (31) each carrying a tool (C) to be changed. The automatic tool changer comprises a bifurcated carrier plate (15) and means to traverse the carrier plate between a tool storage position and the spindle of the machining apparatus. The upper tool-feeding arm of the plate (15) has two support rods suspended therefrom and means to detachably hold an adapter on the vertical support rods, and the lower tool-withdrawing arm of the carrier has two upstanding support rods. <IMAGE>

IPC 1-7  
**B23Q 3/155**

IPC 8 full level  
**B23Q 3/155** (2006.01)

CPC (source: EP KR US)  
**B23Q 3/12** (2013.01 - US); **B23Q 3/155** (2013.01 - EP KR US); **B23Q 3/15513** (2013.01 - EP US); **B23Q 3/1554** (2013.01 - EP); **B23Q 3/15724** (2016.10 - US); **B23Q 3/15733** (2013.01 - US); **B23Q 2003/155407** (2016.10 - EP US); **Y10T 483/1705** (2015.01 - EP US); **Y10T 483/1707** (2015.01 - EP US); **Y10T 483/1736** (2015.01 - EP US); **Y10T 483/1783** (2015.01 - EP US); **Y10T 483/1891** (2015.01 - EP US)

Citation (search report)  
• [A] DE 1652706 A1 19700108 - MUELLER MAX BRINKER MASCHF  
• [A] DD 244933 C4 19880525 - HONSBERG GMBH GEB [DE]  
• [A] CH 651237 A5 19850913 - SMT MACHINE CO AB  
• [A] DD 238755 B1 19881026 - WERKZEUGMASCH FORSCHZENT [DD]

Designated contracting state (EPC)  
CH DE FR GB IT LI

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**EP 0492816 A1 19920701**; JP H04201147 A 19920722; KR 920009507 A 19920625; KR 940002678 B1 19940330; US 5250017 A 19931005

DOCDB simple family (application)  
**EP 91311097 A 19911129**; JP 33682990 A 19901130; KR 910010983 A 19910628; US 79600191 A 19911122